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GOLF COURSE MAINTENANCE REPORT

1985 BIENNIAL REVIEW

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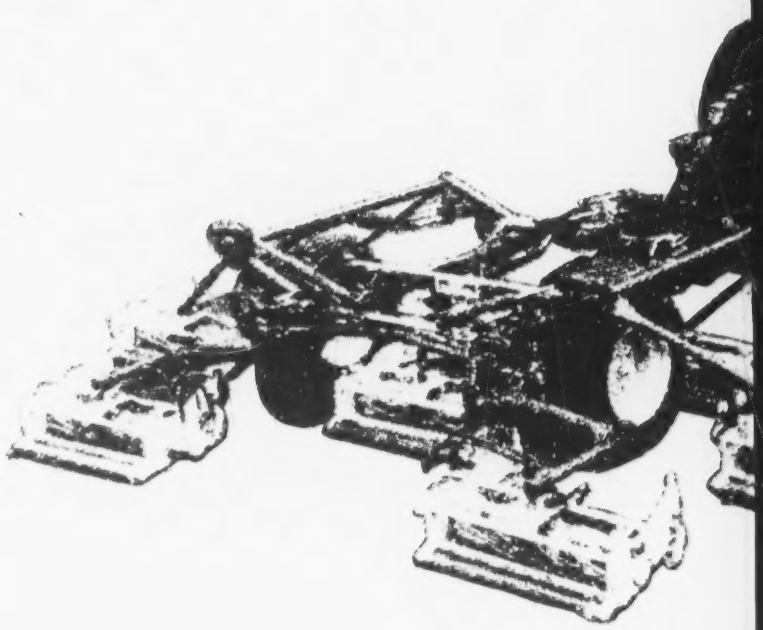

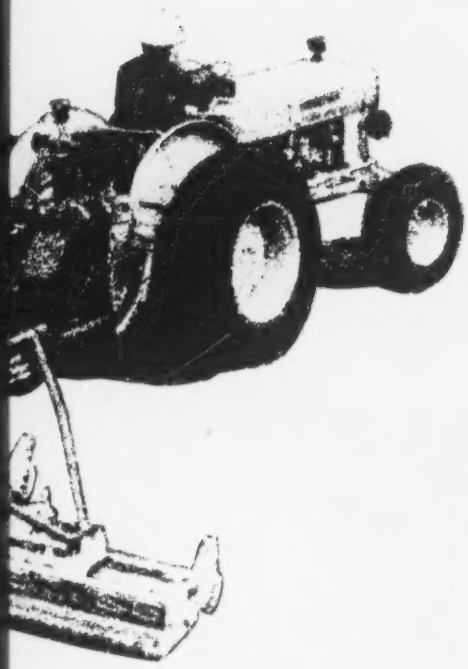

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INTRODUCTION

The 1985 Golf Course Maintenance Report is the result of a joint effort by the Golf Course Superintendents Association of America and the National Golf Foundation. The purpose of the report is to provide basic information on:

- Golf course characteristics
- Maintenance costs
- Maintenance staff

This report is based on the results of a survey of 2,309 golf facilities conducted in the autumn of 1984. A complete description of the sample is presented on the following page.

Projecting the financial data obtained from the sample to the population of golf facilities in the United States, we estimate that $1.7 billion is spent each year for golf course maintenance. Further, we estimate that the nation's courses currently have a maintenance equipment inventory valued at over $1.8 billion.

Perhaps our most significant finding is the fact that **golf course maintenance costs vary dramatically both between and within facility types and regions.** For example, we found that 50 percent of all private 18 hole regulation length courses spend at least $207,006 per year on maintenance operating costs. But our data also shows that nationwide, 25 percent spend at least $291,573 per year to maintain their courses. In the west south central, mountain, and pacific regions the top 25 percent of courses spend roughly $400,000 per year.

The most important implication of our findings is that **there is no single standard for golf course maintenance costs.** Factors such as facility type, size, region, quality of maintenance, and the number of rounds played must be considered when comparing a specific facility's costs to the figures presented in this report.

The **NGF** and the **GCSAA** plan to repeat this study of maintenance costs every two years in order to monitor trends and provide you with current information. We welcome any comments and suggestions for future studies.

JOSEPH F. BEDITZ, Ph.D.
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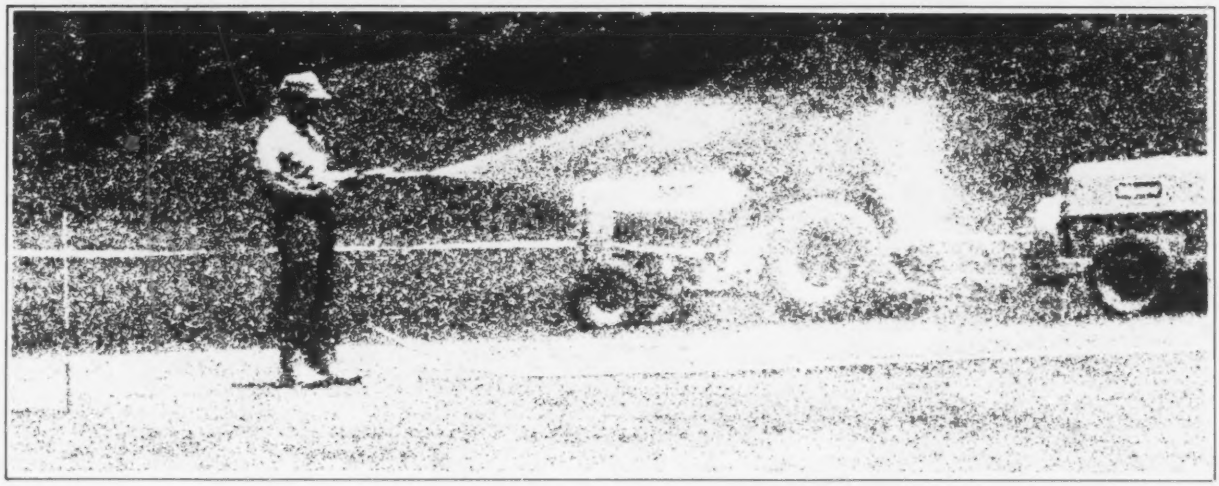
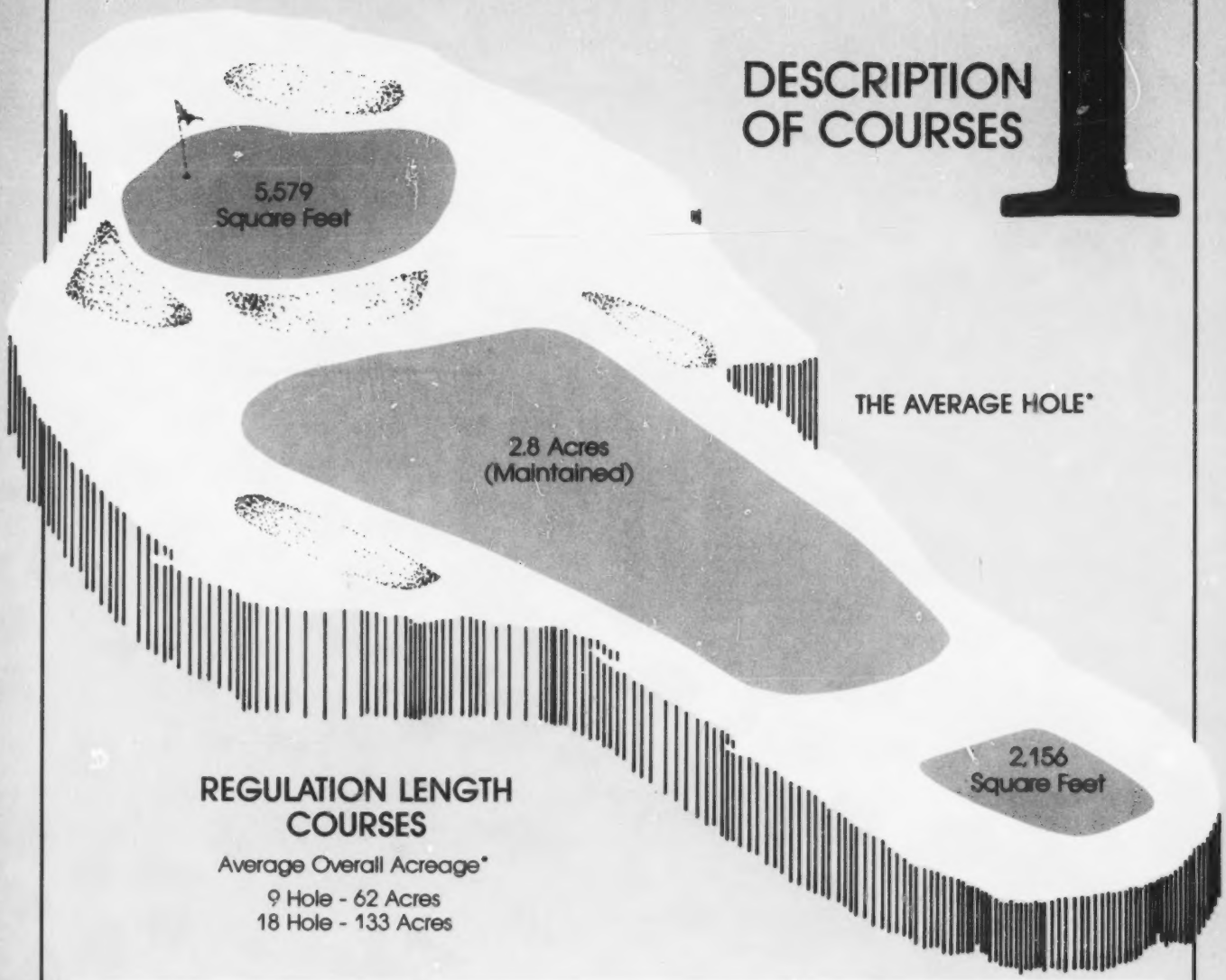


DESCRIPTION OF THE SAMPLE

		Number of Facilities [1] Reporting	Number of Facilities Nationwide	Percent of Facilities Sampled %
	TOTAL SAMPLE	2,309	12,278	18.8
BY TYPE:	**PRIVATE**	**(1,195)**	**(4,831)**	**(24.7)**
	-Regulation	1,148	4,602	24.9
	-Non-Regulation	47	229	20.5
	DAILY FEE	**(742)**	**(5,566)**	**(13.3)**
	-Regulation	619	4,562	13.6
	-Non-Regulation	123	1,004	12.3
	MUNICIPAL	**(372)**	**(1,881)**	**(19.8)**
	-Regulation	334	1,680	19.9
	-Non-Regulation	38	201	18.9
BY REGION:	**NORTH EAST**	**(457)**	**(2,400)**	**(19.0)**
	-New England	164	810	20.2
	-Mid Atlantic	293	1,590	18.4
	NORTH CENTRAL	**(815)**	**(4,137)**	**(19.7)**
	-East North Central	544	2,575	21.1
	-West North Central	271	1,562	17.3
	SOUTH	**(669)**	**(3,852)**	**(17.4)**
	-South Atlantic	420	2,077	20.2
	-East South Central	112	744	15.1
	-West South Central	137	1,031	13.3
	WEST	**(368)**	**(1,889)**	**(19.5)**
	-Mountain	143	719	19.9
	-Pacific	225	1,170	19.2
BY SIZE:	**9 Holes**	593	5,248	11.3
	18 Holes	1,483	6,290	23.6
	27 Holes or More	233	740	31.5

1. The term facility denotes a single geographical area that contains one or more golf courses under one management.

1 DESCRIPTION OF COURSES



THE AVERAGE HOLE*

REGULATION LENGTH COURSES

Average Overall Acreage*

9 Hole - 62 Acres
18 Hole - 133 Acres

FOOTNOTES

*Averages are for 18-hole regulation courses only.
*Averages are median values which indicate that 50% of the sample are above and 50% below the number stated.

AVERAGE AGE (IN YEARS)

	PRIVATE	MUNICIPAL	DAILY FEE
NATIONWIDE	44	25	19
BY REGION:			
NORTH EAST	62	39	25
NORTH CENTRAL	57	28	19
SOUTH	23	21	16
WEST	27	23	17

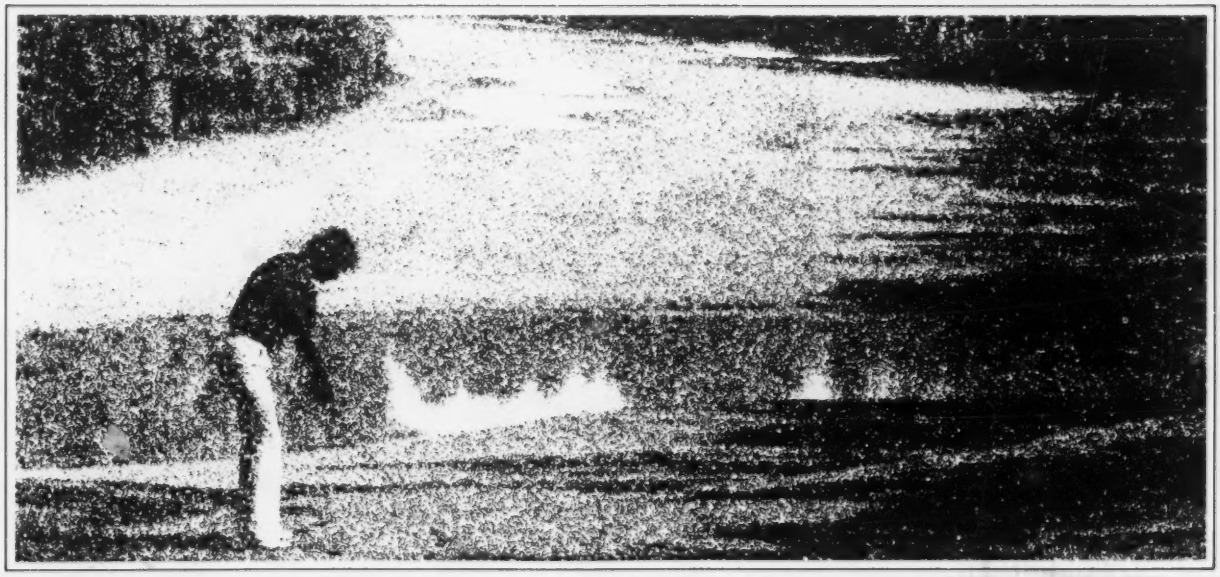
ROUNDS PLAYED

Regulation Length Facilities

	Private	Municipal	Daily Fee
18 Hole Regulation Length			
(Number of Courses Reporting)	(809)	(215)	(345)
Nationwide	25,308	47,326	29,375
By Region:			
North East	23,372	45,333	28,036
North Central	24,420	42,105	27,955
South	25,813	49,091	30,000
West	31,250	67,500	38,575
9 Hole Regulation Length			
(Number of Courses Reporting)	(194)	(76)	(199)
Nationwide	13,214	16,111	15,833

Executive and Par 3 Facilities

	Number of Courses Reporting	Annual Rounds Played
9 Hole	119	14,167
18 Hole	79	28,929



GRASS

Area Of Course/Season (Number of Courses Reporting)	NE (164) %	MA (293) %	ENC (544) %	WNC (271) %	SA (420) %	ESC (112) %	WSC (137) %	MTN (143) %	PAC (225) %	NATION (2309) %
GREENS										
Summer:										
Bent	88.4	84.2	90.0	88.9	42.6	44.7	34.5	76.7	58.8	70.9
Bermuda	1.2	.7	.9	1.5	54.2	54.4	64.7	13.0	9.0	18.7
Poa Annua	9.1	12.7	8.4	5.6	2.1	0	0	5.5	29.6	8.5
Other	1.3	2.4	.7	4.0	1.1	.9	.8	4.8	2.6	1.9
Winter:										
Bent	32.1	54.5	41.1	34.8	45.2	43.4	37.9	54.5	54.5	44.3
Zoysia	0	0	0	.4	38.0	46.0	44.3	13.1	3.0	13.1
Poa Annua	7.3	10.1	2.2	.4	2.1	0	0	3.4	31.3	6.1
Other Or Not Applicable	60.6	35.4	56.7	64.4	14.7	10.6	17.8	29.0	11.2	36.5
TEES										
Summer:										
Kentucky Bluegrass	38.8	24.4	42.5	56.5	9.7	7.0	1.4	51.4	14.0	29.1
Bermuda	1.2	.3	1.1	4.5	71.2	76.3	94.2	24.7	37.1	28.6
Bent	23.6	39.2	34.1	7.4	5.3	5.3	1.4	11.0	10.0	18.4
Poa Annua	14.5	14.4	13.3	6.7	1.4	1.8	0	3.4	15.7	8.8
Perennial Ryegrass	12.7	14.8	4.4	7.1	9.5	3.5	1.4	6.2	10.9	8.1
Other	9.2	6.9	4.6	17.7	2.9	6.1	1.6	3.3	12.3	7.0
Winter:										
Perrenial Ryegrass	4.3	8.6	2.6	4.1	54.8	45.6	58.1	23.8	30.3	22.8
Kentucky Bluegrass	12.9	13.0	16.6	21.6	9.6	6.1	2.2	30.6	14.7	14.5
Bent	11.0	28.1	18.1	1.5	4.9	5.3	2.2	8.8	9.1	11.4
Bermuda	0	0	.2	1.1	23.3	21.1	32.4	4.8	11.3	8.8
Other Or Not Applicable	71.8	50.3	62.5	71.7	7.4	21.9	5.1	32.0	34.6	42.5
FAIRWAYS										
Summer:										
Kentucky Bluegrass	38.0	30.6	52.8	66.8	13.3	13.2	1.4	61.6	14.3	35.0
Bermuda	.6	.3	0	3.4	74.0	71.1	92.6	25.3	35.7	28.3
Poa Annua	26.4	21.6	22.1	9.0	.7	.9	0	3.4	20.0	13.1
Bent	14.1	19.6	13.8	2.2	.9	2.6	0	2.7	6.1	8.0
Perennial Ryegrass	7.4	17.2	4.6	3.0	7.9	4.4	0	4.1	8.3	6.8
Other	13.5	10.7	6.7	15.6	3.2	7.8	5.8	2.9	15.6	8.8
Winter:										
Bermuda	0	0	.2	2.6	59.0	54.1	77.5	14.3	21.3	21.5
Kentucky Bluegrass	11.0	18.9	21.5	25.2	12.4	9.9	3.6	43.5	15.2	18.3
Perrenial Ryegrass	3.1	12.4	2.8	2.2	19.4	9.9	3.6	12.2	16.5	9.4
Poa Annua	12.9	16.2	7.3	.7	.9	.9	2.9	1.4	22.6	7.4
Bent	6.7	14.4	8.6	.7	.9	2.7	0	1.4	4.8	5.2
Other Or Not Applicable	66.3	38.1	59.6	68.6	7.4	22.5	12.4	27.2	19.6	38.2
ROUGH										
Predominant Year Round:										
Kentucky Bluegrass	54.8	55.9	71.6	68.5	13.0	22.8	.7	49.0	16.3	43.9
Bermuda	0	.7	.2	1.1	54.4	42.1	69.1	23.1	30.0	20.8
Fescue	15.7	14.8	12.4	7.0	13.3	14.0	3.6	5.4	6.4	11.0
Perennial Ryegrass	6.6	11.0	6.4	2.9	2.3	4.4	0	6.8	11.6	5.9
Other	22.9	17.6	9.4	20.5	17.0	16.7	26.6	15.7	35.7	18.4

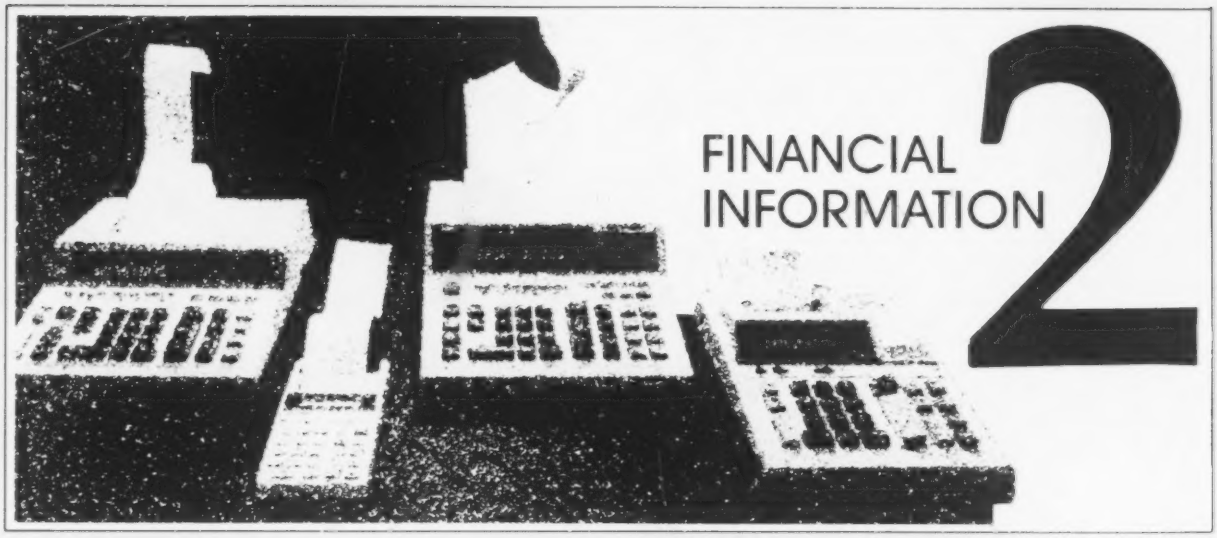
IRRIGATION

Source of Water

	NE	MA	ENC	WNC	SA	ESC	WSC	MTN	PAC	NATION
(Number of Courses Reporting)	(164)	(293)	(544)	(271)	(420)	(112)	(137)	(143)	(225)	(2309)
SOURCE	%	%	%	%	%	%	%	%	%	%
Lakes and Streams	58.2	54.2	46.6	29.8	51.6	47.8	30.9	46.5	23.7	44.2
Wells	18.2	23.4	35.3	47.4	31.4	27.4	40.3	34.7	40.5	33.7
Local Potable Water	21.8	18.6	15.7	18.0	7.9	18.6	18.7	11.1	27.6	16.6
Effluent Water	1.2	3.4	1.6	1.8	8.8	3.5	8.6	6.9	7.3	4.6
No Irrigation	.6	.3	.7	2.9	.2	2.7	1.4	.7	.9	1.0

Type of System

	Sprinkler Configuration			Private	Municipal	Daily Fee	Overall
(Number of Courses Reporting)				(1198)	(378)	(739)	(231.5)
Greens	Tees	Fairways	Rough	%	%	%	%
Automatic	Automatic	Automatic	Automatic	54.5	47.6	31.3	46.0
Manual	Manual	Manual	Manual	20.7	22.0	26.5	22.8
Manual	Manual	None	None	8.3	12.4	24.1	14.0
Automatic	Automatic	Manual	Manual	10.1	9.8	10.7	10.2
Automatic	Automatic	None	None	5.2	6.9	6.2	5.8



FINANCIAL INFORMATION 2

Introduction

The Financial Information section contains data on three areas of golf course maintenance accounting: operating costs; capital expenditures; and inventory values. The data in each section is broken down by type of facility (private, municipal and daily fee), facility size (regulation, executive and par-3), and number of holes.

Regional indices have been developed to show differences between regional data and the national average. For example, an index value of 100 means that the regional figure is equal to the national average. A value of 118 shows that the region is 18% above the average and a value of 86 shows a region is 14% below the national average.

Operating Costs

Operating costs are any annual maintenance expenses, excluding capital expenditures. In addition to personnel costs, these could include costs of fertilizers, seed, equipment maintenance and repair, insecticides, bunker sand, etc.

Private courses spend 14.6 percent more on maintenance than municipal courses and 71.6 percent more than daily fee courses, on the average nationwide. Courses in the Western U.S. spend the most while those in the North Central region spend the least, on the average. Both private and municipal 9-hole facilities exceed daily fee operating costs by about 30 percent. Significantly higher operating costs are incurred by 18-hole executive and par-3 courses over their 9-hole counterparts.

Capital Expenditures

Superintendents provided data on two types of expenditures: those concerning capital projects (such as golf car path construction and tee and green re-construction) and money spent on maintenance equipment (mowers, tractors, and trucks).

Projects

Municipal 18-hole courses outspend private courses by an average of 13.3 percent and daily fee courses by 51.8 percent in capital project expenditures. This is also true for 9-hole courses to a lesser degree. Regionally, the West again spends significantly more than the national average, while the North Central again spends less. Par-3 and executive 18-hole courses spend about twice as much as 9-hole courses.

Equipment

For maintenance equipment expenditures, private courses lead municipal courses by 4.7 percent and daily fee courses by 60.4 percent for 18-hole regulation facilities. Regionally, the West is the leader in expenditures. The North East spends less for municipal courses, and the North Central spends less for daily fee courses. Nine-hole regulation municipals lead private facilities by 11 percent and daily fee by 41 percent in captial equipment purchases. At executive and par-3 facilities, expenditures for 18-hole courses are more than double those of 9-hole courses.

Inventory Values

Equipment inventory values refer to the total current "book value" of all maintenance equipment. Included are all tractors, mowers, trucks and other maintenance capital equipment.

Private 18-hole regulation courses have the most invested in inventory — 13.7 percent more than municipal courses and 48.6 percent more than daily fee facilities. The leader regionally was again the West. Among regulation 9-hole courses, daily fee course inventories were slightly higher than those of private and municipal courses. For executive and par-3 courses, 18-hole course inventories are three times those of 9-hole courses.

OPERATING COSTS

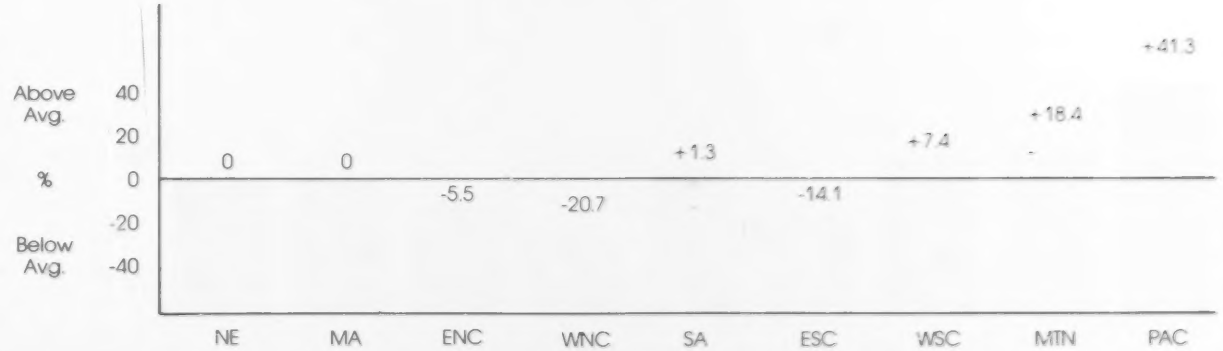
Private 18-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least	Regional Cost Index [1]
NATIONWIDE	836	$137,171	$207,006	$291,573	100
BY REGION:					
New England	50	140,625	207,692	262,500	100
Mid Atlantic	134	139,423	207,143	258,750	100
East North Central	185	126,563	195,625	255,288	95
West North Central	59	121,528	164,063	240,278	79
South Atlantic	178	138,281	209,677	344,231	101
East South Central	46	112,500	177,778	243,750	86
West South Central	68	150,000	222,222	400,000	107
Mountain	47	167,188	245,000	410,417	118
Pacific	69	210,227	292,500	398,958	141

1. A regional cost index of 118 shows that a region is 18% above the national average in operating costs.

Regional Breakdown of Private 18-Hole Operating Costs

Regional Variation of Private 18-Hole Operating Costs



Municipal 18-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least	Regional Cost Index
NATIONWIDE	214	$119,907	$180,556	$263,235	100
BY REGION:					
North East	26	145,833	211,111	247,222	117
North Central	83	110,795	163,542	216,346	91
South	56	120,833	200,000	272,222	111
West	49	122,321	208,333	427,500	115

Daily Fee 18-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least	Regional Cost Index
NATIONWIDE	353	$72,361	$120,608	$193,125	100
BY REGION:					
North East	71	60,795	97,115	142,361	81
North Central	123	58,882	90,948	140,865	75
South	94	91,250	145,000	220,833	120
West	65	122,321	213,462	359,375	177

9-Hole Facilities

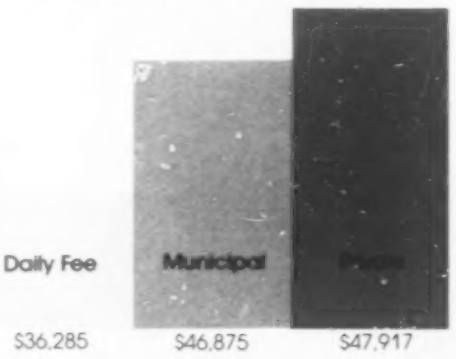
	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least
NATIONWIDE	474	$23,554	$42,167	$72,068
BY FACILITY TYPE:				
Private	197	25,116	47,917	84,226
Municipal	76	27,083	46,875	83,333
Daily Fee	201	21,737	36,285	58,958

Executive and Par-3 Facilities

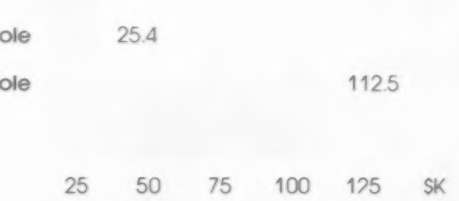
	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least
FACILITY SIZE:				
9-Hole	119	$18,803	$25,446	$54,688
18-Hole	80	61,364	112,500	175,000

Comparison of 18-Hole Facilities

Comparison of 9-Hole Facilities



Comparison of Executive, Par-3 Facilities

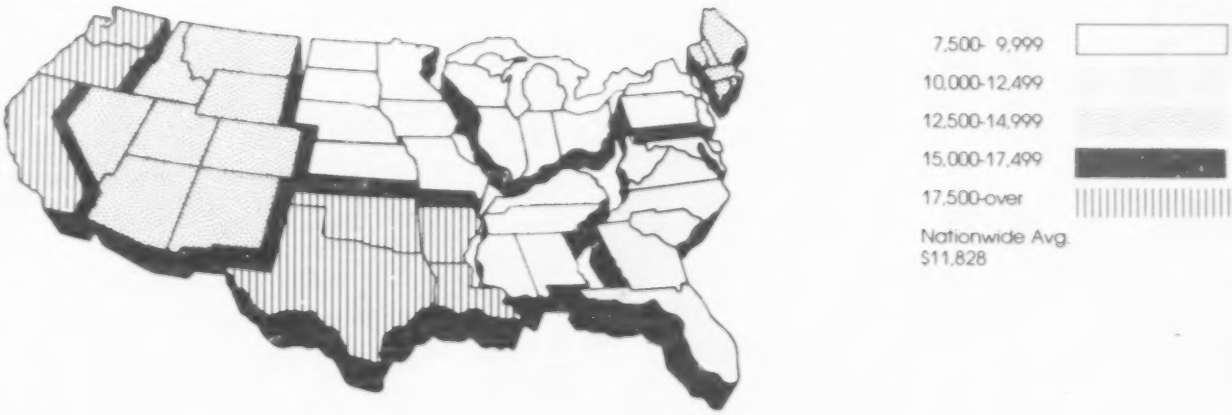


PROJECT EXPENDITURES

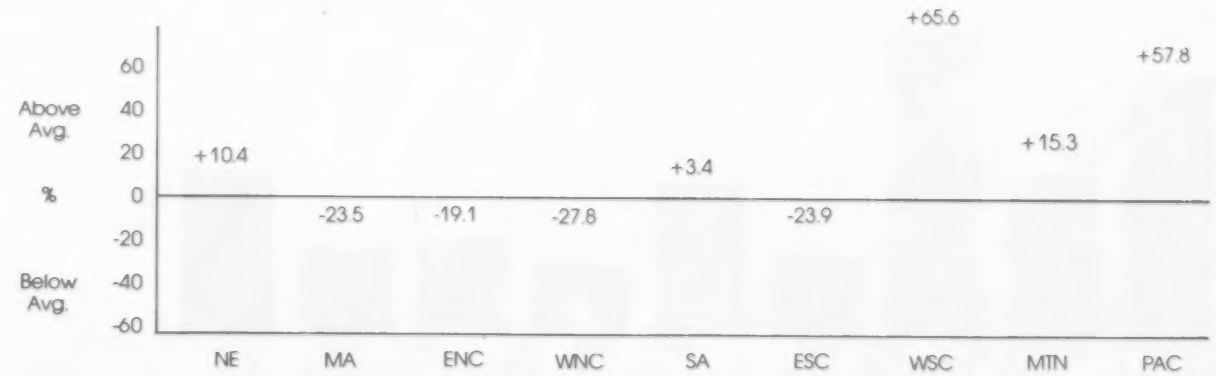
Private 18-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least	Regional Spending Index
NATIONWIDE	831	$5,608	$11,828	$22,679	100
BY REGION:					
New England	49	6,932	13,056	21,500	110
Mid Atlantic	133	4,263	9,044	18,125	76
East North Central	184	4,694	9,574	18,750	81
West North Central	59	3,512	8,542	20,278	72
South Atlantic	179	5,521	12,232	23,152	103
East South Central	46	5,167	9,000	18,438	76
West South Central	67	9,875	19,583	42,500	166
Mountain	44	8,500	13,636	22,857	115
Pacific	70	10,357	18,667	39,167	158

Regional Breakdown of Private 18-Hole Capital Project Expenditures



Regional Variation of Private 18-Hole Capital Project Expenditures



PROJECT EXPENDITURES

Municipal 18-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least	Regional Spending Index
NATIONWIDE	214	$6,313	$13,636	$27,174	100
BY REGION:					
North East	26	8,125	14,167	18,929	104
North Central	82	4,659	11,333	21,667	83
South	57	5,938	13,750	25,938	101
West	49	9,028	19,500	43,500	143

Daily Fee 18-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least	Regional Spending Index
NATIONWIDE	349	$4,277	$8,984	$16,756	100
BY REGION:					
North East	70	4,375	9,688	15,250	108
North Central	120	3,261	6,944	12,222	77
South	94	5,500	10,385	20,417	116
West	65	5,446	12,500	25,625	139

9-Hole Facilities

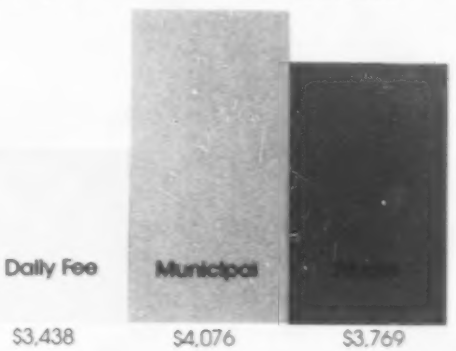
	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least
NATIONWIDE	472	$1,832	$3,665	$6,569
BY FACILITY TYPE:				
Private	199	1,884	3,769	7,006
Municipal	75	2,038	4,076	7,563
Daily Fee	198	1,719	3,438	5,577

Executive and Par-3 Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least
FACILITY SIZE:				
9-Hole	120	$1,705	$3,409	$5,500
18-Hole	79	2,904	6,310	13,036

Comparison of 18-Hole Facilities

Comparison of 9-Hole Facilities



Comparison of Executive, Par-3 Facilities

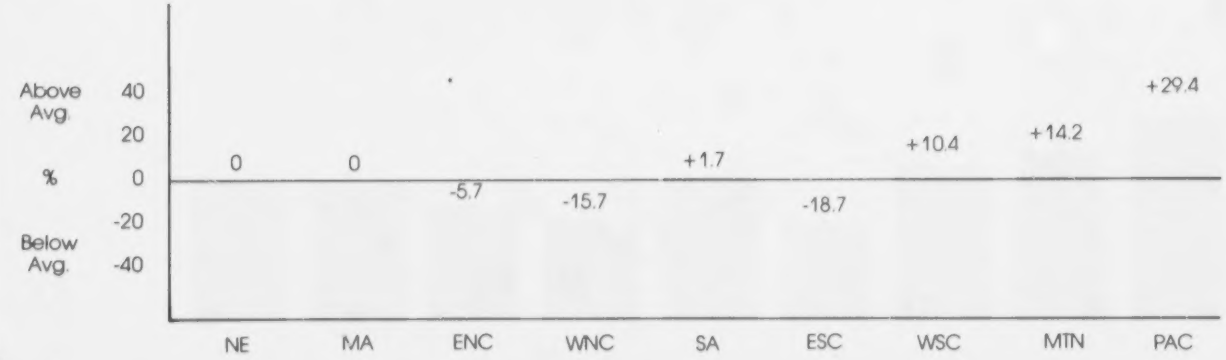
EQUIPMENT EXPENDITURES

Private 18-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least	Regional Spending Index
NATIONWIDE	822	$9,949	$17,517	$27,861	100
BY REGION:					
New England	48	11,667	17,500	26,667	100
Mid Atlantic	133	9,491	17,130	25,726	98
East North Central	180	8,780	16,515	25,641	94
West North Central	59	8,482	14,773	23,750	84
South Atlantic	177	10,607	17,813	30,921	102
East South Central	45	8,281	14,250	22,500	81
West South Central	66	12,500	19,333	29,667	110
Mountain	44	13,333	20,000	29,167	114
Pacific	70	13,056	22,667	38,125	129

Regional Breakdown of Private 18-Hole Maintenance Equipment Expenditures

Regional Variation of Private 18-Hole Maintenance Equipment Expenditures



EQUIPMENT EXPENDITURES

Municipal 18-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spends At Least	Regional Spending Index
NATIONWIDE	210	**$10,893**	$16,731	**$24,625**	100
BY REGION:					
North East	24	10,556	13,889	19,000	83
North Central	81	10,391	16,250	22,885	97
South	57	10,568	16,731	25,750	100
West	48	13,333	19,167	27,692	115

Daily Fee 18-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least	Regional Spending Index
NATIONWIDE	347	**$6,396**	$10,919	**$18,324**	100
BY REGION:					
North East	70	6,700	10,385	17,500	95
North Central	118	4,917	8,537	14,375	78
South	94	8,295	13,200	21,923	121
West	65	7,083	13,750	23,929	126

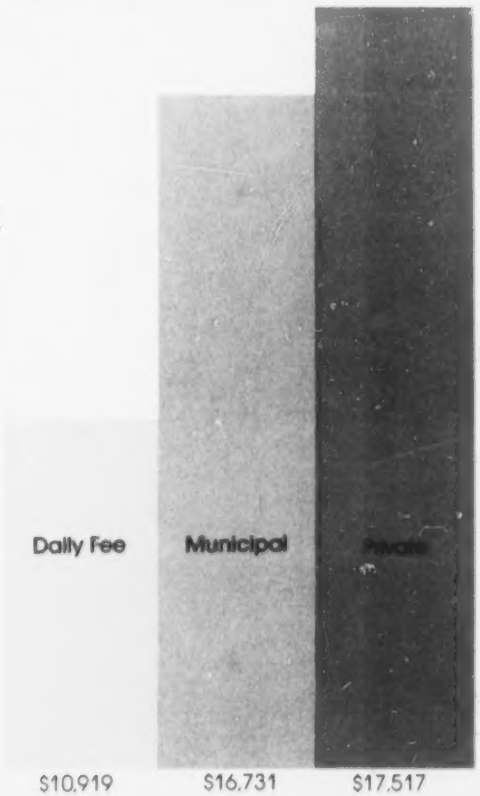
9-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least
NATIONWIDE	**463**	$2,595	**$5,264**	$8,859
BY FACILITY TYPE:				
Private	193	2,805	5,729	9,080
Municipal	72	3,103	6,458	10,833
Daily Fee	198	2,292	4,583	8,115

Executive and Par-3 Facilities

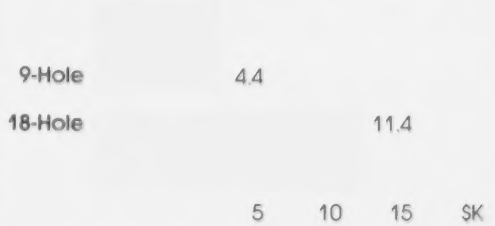
	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least
FACILITY SIZE:				
9-Hole	117	$2,183	$4,366	$7,882
18-Hole	78	5,735	11,389	20,714

Comparison of 18-Hole Facilities



Comparison of 9-Hole Facilities

Comparison of Executive, Par-3 Facilities

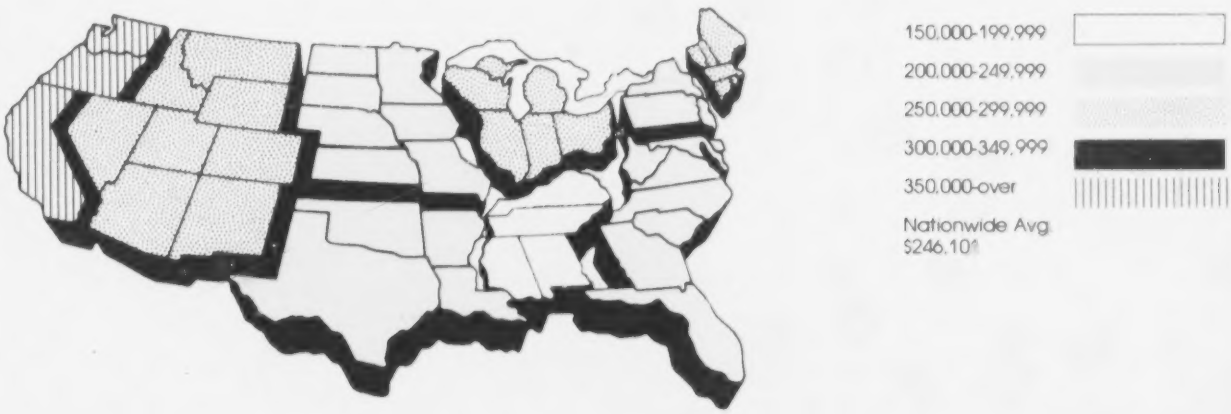


INVENTORY VALUES

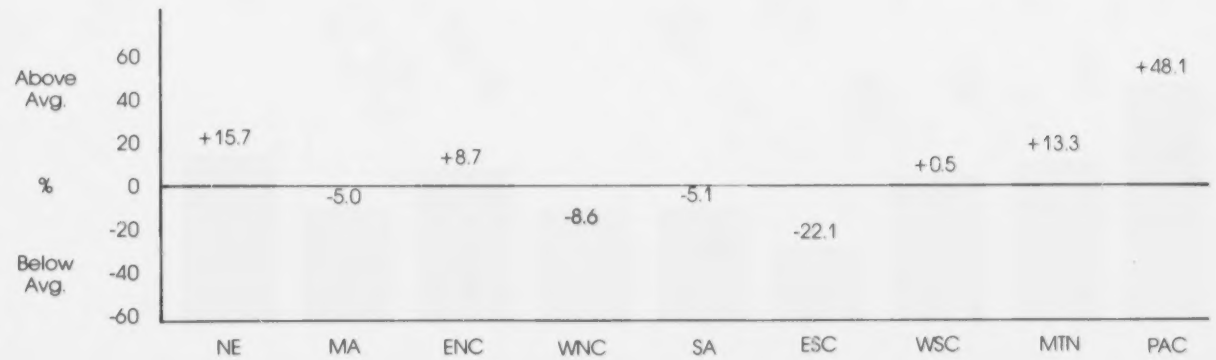
Private 18-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least	Regional Value Index
NATIONWIDE	831	$151,689	$246,101	$472,377	100
BY REGION:					
New England	49	173,214	284,722	454,861	116
Mid Atlantic	131	149,219	233,750	437,500	95
East North Central	183	149,375	267,500	496,250	109
West North Central	59	133,929	225,000	410,156	91
South Atlantic	179	159,274	233,621	470,313	95
East South Central	46	103,571	191,667	402,778	78
West South Central	69	151,389	247,222	470,395	100
Mountain	45	140,278	278,846	495,192	113
Pacific	70	184,375	364,583	687,500	148

Regional Breakdown of Private 18-Hole Inventory Values



Regional Variation of Private 18-Hole Inventory Values



Municipal 18-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least	Regional Value Index
NATIONWIDE	**211**	**$131,500**	**$216,429**	**$396,250**	**100**
BY REGION:					
North East	24	150,000	210,000	333,333	97
North Central	81	111,250	206,250	378,289	95
South	58	132,143	222,727	375,000	103
West	48	155,556	228,571	583,333	106

Daily Fee 18-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least	Regional Value Index
NATIONWIDE	**349**	**$97,406**	**$165,625**	**$242,898**	**100**
BY REGION:					
North East	69	86,250	140,278	195,833	85
North Central	121	86,932	153,000	221,094	92
South	94	106,818	186,842	343,750	113
West	65	121,250	190,385	383,929	115

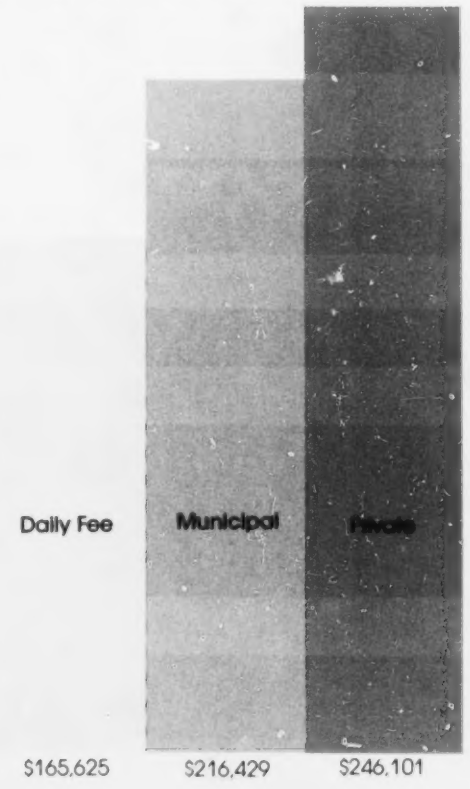
9-Hole Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least
NATIONWIDE	**472**	**$38,981**	**$57,962**	**$95,541**
BY FACILITY TYPE:				
Private	199	38,092	54,091	99,318
Municipal	74	39,015	59,091	104,167
Daily Fee	199	39,985	60,313	91,406

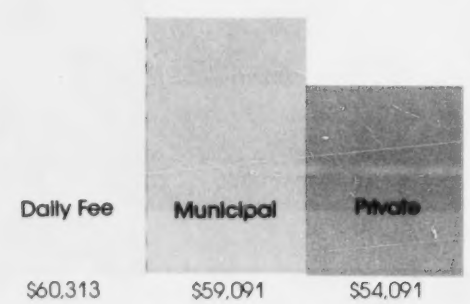
Executive and Par-3 Facilities

	Number of Courses Reporting	75% Spend At Least	50% Spend At Least	25% Spend At Least
FACILITY SIZE:				
9-Hole	121	$35,651	$46,303	$115,833
18-Hole	78	80,357	152,632	210,714

Comparison of 18-Hole Facilities



Comparison of 9-Hole Facilities



Comparison of Executive, Par-3 Facilities

KEY FINDINGS
FINANCIAL INFORMATION

OPERATING COSTS

- Annual maintenance costs at private 18-hole regulation courses exceed those at municipal and daily fee courses by 14.6% and 71.6% respectively.
- On a regional basis, the West had higher operating costs—significantly higher for private and daily fee 18-hole regulation courses.
- Operating costs at private and municipal 9-hole regulation courses were greater than those at daily fee courses by almost 30%.
- At Executive and Par-3 courses, costs were more than four times greater for 18-hole than 9-hole courses.

CAPITAL EXPENDITURES

- Municipal courses — both 9 and 18 holes — budget more for capital project expenditures than private or daily fee courses.
- For 18-hole private courses, the West South Central and Pacific regions were far above the national average for project expenditures.
- Private 18-hole courses lead municipals by 4.7% and daily fee courses by 60.4% for maintenance equipment expenditures.
- At Executive and Par-3 courses, expenditures were twice as much for 18-hole than for 9-hole courses for both project and equipment expenditures.

INVENTORY VALUES

- Private 18-hole courses have more invested in equipment inventory, 13.7% more than municipal and 48.6% more than daily fee courses.
- The West led all other regions in inventory values for each type of 18-hole regulation facility.
- At 9-hole facilities, daily fee inventories of maintenance equipment were greater than either private or municipal facilities by margins of 2% and 11.5% respectively.
- For Executive and Par-3 courses, inventory values for 18-hole courses were three times higher than those of 9-hole courses.

3 MAINTENANCE PERSONNEL

Introduction

The largest single expense in maintaining a golf facility is personnel. Well over half of the annual operating budget is devoted solely to wages, salaries, and payroll taxes. This does not include the cost of providing benefits such as insurance, pensions and paid leave. This section describes what we found out about maintenance personnel at various types and sizes of facilities.

The Superintendent

The "average" superintendent:

- is in his mid-thirties
- has at least an associate degree from college
- has had 9 to 10 years of experience
- has been at his present facility for 5 to 6 years.

18-hole facilities are twice as likely than 9-hole facilities to have a superintendent who is a member of the GCSAA, and private 18-hole facilities are at least twice as likely, than public facilities, to employ a superintendent who has been certified by the GCSAA.

The Maintenance Staff

18-hole courses employ on the average 8 to 10 employees during the peak season and 3 to 5 employees during the rest of the year. Between 60 and 70 percent of all maintenance budgets are devoted to personnel. In general, municipal courses pay the highest wages to maintenance staff. They are also much more likely to have a staff that is unionized. On the average 18-hole facilities pay about 30 to 35 percent higher wages than 9-hole facilities.

Employee Benefits

Municipal courses offer the most employee benefits followed by private and then daily fee courses. The largest discrepancy between benefits offered is in the area of pension plans. Municipal courses are 4 to 5 times more likey to provide this benefit to employees than are private and daily fee courses. These differences are understandable when government employment and unionization are taken into consideration.

THE SUPERINTENDENT

	18-Hole Regulation Length Courses			9-Hole Regulation Length Courses		
	Private	Municipal	Daily Fee	Private	Municipal	Daily Fee
Number of courses that responded	836	214	353	197	76	201
Courses with a GCSAA Superintendent	81.7%	59.7%	59.0%	43.8%	25.3%	27.3%
Courses with a Certified GCSAA Superintendent	21.1%	12.5%	9.4%	9.7%	9.3%	5.9%
Average age of the Superintendent	34.5 yrs.	35.0 yrs.	34.3 yrs.	33.8 yrs.	36.2 yrs.	38.9 yrs.
HIGHEST EDUCATIONAL DEGREE:	%	%	%	%	%	%
High School	27.1	32.5	39.1	41.5	50.0	41.1
Associate Degree	34.1	30.7	27.2	27.4	19.0	16.8
Bachelor Degree	36.5	33.4	30.6	26.9	29.8	33.0
Graduate Degree	2.2	3.3	3.1	4.1	1.3	9.1
Average years of experience	12.1 yrs.	13.3 yrs.	13.0 yrs.	9.2 yrs.	7.9 yrs.	9.8 yrs.
Average years at present facility	5.7 yrs.	6.8 yrs.	6.4 yrs.	4.9 yrs.	4.4 yrs.	6.3 yrs.

THE MAINTENANCE STAFF

	18-Hole Regulation Length Courses			9-Hole Regulation Length Courses		
	Private	Municipal	Daily Fee	Private	Municipal	Daily Fee
Number of courses that responded	836	214	353	197	76	201
Annual budget for Maintenance Staff[1]	$116,325	$116,406	$73,983	$34,673	$33,190	$26,884
Percent of budget devoted to personnel[1]	56.2%	64.5%	61.3%	72.4%	70.1%	74.1%
Average number of employees (peak season)	10.0	8.6	7.8	3.6	3.3	3.2
Average number of employees (non-peak)	4.8	4.5	2.9	1.9	1.7	1.6
AVERAGE HOURLY WAGES:						
Assistant Superintendent (Foreman)[2]	$7.89	$8.41	$6.45	$4.81	$5.20	$4.82
Mechanic[3]	$7.36	$8.02	$6.37	$5.38	$6.11	$4.90
Other Maintenance Staff	$4.68	$5.01	$4.39	$4.02	$3.94	$4.09
Percent of facilities with unionized staff	4.5%	30.6%	5.4%	4.5%	16.9%	3.5%

1 Includes superintendents salary plus payroll taxes. Excludes cost of employee benefits.

2 9% of all 18-hole courses and 23% of all 9-hole courses do not employ an assistant superintendent (foreman).

3 15% of all 18-hole courses and 58% of all 9-hole courses do not employ a mechanic.

EMPLOYEE BENEFITS

	18-Hole Regulation Length Courses			9-Hole Regulation Length Courses		
	Private	Municipal	Daily Fee	Private	Municipal	Daily Fee
Number of courses that responded	836	214	353	197	76	201
PERCENT OF FACILITIES THAT OFFER:	%	%	%	%	%	%
Hospitalization Insurance	67.3	80.6	44.9	25.1	46.8	17.2
Pension Plan	20.6	76.7	14.7	11.6	40.3	6.1
Paid Holidays	80.2	84.3	51.3	35.0	48.1	23.7
Paid Vacation	86.2	87.0	58.9	41.9	48.1	26.8
Paid Sick Leave	65.7	82.2	33.8	29.9	48.1	18.2
Uniforms or Uniform Allowance	44.1	49.5	26.0	11.1	18.2	7.6

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